

KARL COOPER      SURVEY AND CAD SERVICES

SPRINGFIELD • GREENWALL ROAD • HOLM • ORKNEY • KW17 2SD  
Tel:                      [Redacted]

**REQUEST FOR A SCREENING OPINION**

23/08/2023

**The Marine Works (Environmental Impact Assessment) (Scotland) Regulations 2017  
EXTENSION TO A SEAWALL AND LAND RECLAMATION**

**LAND ADJACENT TO LODGE 5, ATLANTIS LODGES, FINSTOWN, ORKNEY, KW17 2EH**

**Location of the proposed works**

The proposal is located at the east end of Atlantis Lodges, Finstown, a self catering development between the A965 Kirkwall - Stromness road and the sea on Orkney Mainland. See attached location plan. The site is an undulating coastal slope from the A965 road down to a gently sloping stony foreshore merging into exposed bedrock.

**Regulated activities proposed:**

Shallow excavation of beach bedrock parallel to and approximately at 1m below MHWS to form an excavation for backfilling with mass concrete to form the seawall foundation.

Placing of precast interlocking concrete blocks on the foundation to form a seawall.

Placing of locally sourced quarried stone blocks to form a terraced slope, terminating the eastern end of the seawall against an existing backshore rock face.

Backfilling of the enclosed area behind the seawall and terraced stonework with locally sourced quarried and crushed stone, size 125 down, with low fines content, capped with grass seeded topsoil layer. Maximum overall depth 1.8m. Surface area 230m<sup>2</sup>. Surface level +2.6m ODN, as adjacent existing seawall top and bitmac surfaced areas.

No decommissioning or demolition works are proposed.

**Description of the physical characteristics of the proposed works:**

Seawall foundation: imported 'ready mix' mass concrete placed in situ in a shallow prepared excavation 'between tides' and at neap tides, avoiding immersion in seawater and leaching of fines prior to initial curing.

Seawall: precast concrete interlocking blocks, each 1.2m long by 0.6m x 0.6m.

Infill/backfilling: see description above.

**Description of the location of the proposed works**

The upper foreshore near MHWS and above to a backshore slope of glacial clay and stones. The foreshore is gently sloping bedrock overlain by shingle, cobbles and boulders. The boundary of the North Orkney SPA is located approximately 60m to the north at mean low water springs.

**Description of the aspects of the environment likely to be significantly affected by the proposed works**

There should be no significant short or long term effects other than the prevention of erosion of the coastal slope and loss of clay and stones onto the beach.

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**Expected residues and emissions and the production of waste:**

There should be no residues or emissions as inert materials are proposed, the seawall blocks are fully cured and pre cast offsite. Foundation concrete is of minimal quantity and should be initially cured and hardening before immersion in seawater. Excavated rock shall be stockpiled above MHWS and used in the backfill behind the seawall. Filling behind the seawall and terraced stonework shall be in an impounded area and not exposed to wave action. The quarried material proposed for infill, crushed rock, has a low or residual fines content and any leaching out by the rise and fall of the tide should self seal the close joints of the seawall blocks. All works should be carried out on the landward side of the works so there is should be no site traffic on the seaward side.

**The use of natural resources**

Topsoil for final capping of the infill area shall be from an on site stockpile of site clearance topsoil, screened and prepared for seeding with a low maintenance grass/wild flower mix and set aside for biodiversity.

Bulk infill shall be crushed rock from a local licenced quarry.

Seawall blocks are to be of locally cast mass concrete.

Terraced stonework to be of rock sourced from a local quarry.

The completed construction should prevent the current erosion of the 'soft' coastline and consequent leaching of clay fines into the sea and washing out of stones onto the beach.

**This document to be read in conjunction with the accompanying drawings:**

**Location plan, Site plan, Plan, Seawall cross section**